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# HIGHLY STABLE PULSE STRETCHERS.

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## Abstract

Highly stable pulse stretchers are described that are designed for fine control of pulse duration in digital pulse shapers of nuclear magnetic resonance spectrometers with a quantization step of 0. 1 mu sec. The fine-control range is 20-150 nsec. The stretchers employ acircuit to compensate for the logic-0 voltage and the time delays of the logic elements. The instability of the trailing-edge delay for a supply variation of plus or minus 0. 5 v is less than 0. 1%, and the temperature instability in the range of 20-80 degree C is not over (60/t//d)-0. 3%, where t//d is the trailing-edge delay. The inputs and outputs of the pulse stretchers are matched to TTL and Schottky TTL levels.